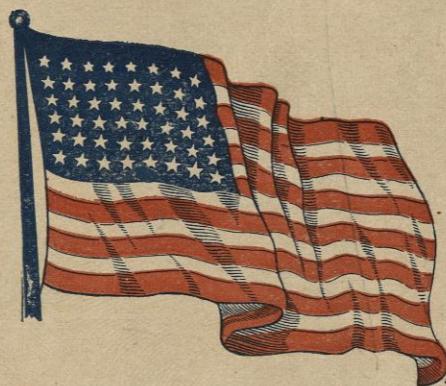


Ax-I-OENT-Ax



**U. S. Smelting, Refining and Mining Company
Employees' Magazine**

JUNE 22, 1918

THE FELLOWS WHO KNOW

By Rufus T. Strohm.

Sadly enough, in this era of trickery,
Humans are trying to be what they're not,
Heedless that coffee compounded with chicory,
Seldom can pass through the test of the pot.
Thus, though pretenders may capture the galleries
And by audacity garner the dough,
Still, in the long run, the choicest of salaries,
Drop in the jeans of the fellows who know.

Some of the ignorant, wantonly venturing,
Knowing they're either dead righ or dead wrong,
Blind to the danger and deaf to the censuring,
Trust to the bluffing to help them along;
Thus, while they're constantly fearful and quavering,
Wondering whether they'll stay or they'll go,
No such alarms or suspicions of wavering
Trouble the lives of the fellows who know.

Bluff and deception may win temporarily,
Leaving Old Honesty far in the rear,
Still, prudent folks will consider them war'ly,
Choosing instead to be strictly sincere,
No reputations of worth and solidity
Out of imposture and knavery grow,
Yet recognition with pleasing rapidity
Comes to the doors of the fellows who know.

Guesswork is weakness—a sand rope whose rottenness
Millions of toilers still stupidly try,
Though it betrays into lasting forgottleness
Those who so foolishly on it rely.
Knowledge is power, and men of sagacity,
Yearning for honors the world can bestow,
Ceaselessly striving for increased capacity,
Share the rewards of the fellows who know.

BUILDS
EFFICIENCY
UPWARD

AX-I-DENT-AX

SAFETY - FIRST

CHOPS
REGRETS
DOWN

UNITED STATES METALS REFINING COMPANY

CHOP 3

East Chicago, Indiana, June 22, 1918

CHIP 12



ROY S. BONSIB

On Saturday last Mr. Roy S. Bonsib received a telegram to report in Philadelphia Monday, June 17th, for a meeting of the district safety managers of the Emergency Fleet Corporation, and so was obliged to quickly sever his connection with the "Ax-I-Dent-Ax," a paper which he fostered and improved by careful management until it is as you see it today.

Mr. Bonsib, as an employee of the Emergency Fleet Corporation, will have supervision of the accident prevention work for thirty-two ship yards in the State of California and his headquarters will be in San Francisco. The readers of the "Ax" congratulate Mr. Bonsib on the great opportunity thus afforded him and wish him every success in his new undertaking.

Although our editor had received the degrees of A. B., A. M., and E. M., from Columbia University, he was democratic, fraternizing with employees and always took an active interest in their welfare. As Vice-President of Local No. 40 National Safety Council and a member of the Employment Managers' Association of Chicago, his influence for progress was felt strongly in this district.



PAGE

NUMBER

TWO

WHAT'S GOING ON AT MIDVALE

By BRUCE JOHNSON—First Aid Man.

OUR REPRESENTATIVE.

Those of the Midvale boys who remember the handsome, erect and soldierly bearing of **Harry Phillips**, formerly of the Carpenter Department, will be pleased to see his picture, taken "Somewhere in France." He is corporal in Co. A, 30th Engineers, A. E. F. We all look upon him as one of our personal representatives "Over There."

* * *

BUSY FOR UNCLE SAM.

By the time this is published there will be an active war stamp campaign on at the Smelter. **Mr. Wallace** has charge of this and he states that every man in the plant should have about \$40 worth of war stamps at the end of the year. You may need the money right now but the chances are that you will need it a whole lot worse after the war. The money you put into War Savings Stamps is better than money in the bank; so dig out the old sock and invest in stamps.

* * *

FIRST ACCIDENT PREVENTION MEETING.

The general foremen had their first safety meeting on the first of the month. Accidents and their causes were taken up and after a short talk, the meeting was adjourned until next month.

The accident prevention report of **Mr. Tolsted's** has been received and the Mechanical Department is now busy following out his suggestions.

Mr. Tolsted's report is very concise and to the point, a very clever insight into the safety movement being shown.

* * *

CALLED TO COLORS.

T. E. Harper of the Research Laboratory has been called to the colors.



Harry Phillips

Somewhere in France.

AX-I-DENT-AX



PAGE

NUMBER

THREE

EXPERIENCE A DEAR TEACHER.

Ivory Hughes of the Lead Department claimed that a piece of coke flew into his eye and caused him to lose about three months' work. **He failed to wear goggles** that are furnished free by the company and **he also failed to receive compensation**. From the Safety Engineer's standpoint when as strong efforts as have been made here on this plant to have men wear goggles and they fail to do so, an eye injury is not

an accident but a deliberate attempt to self-injury. Some men claim that goggles are hot on the face during the warm weather; the same is true of shoes and clothing and we fail to notice anyone going about without shoes or clothing.

General Roaster Foreman Wright has moved to Midvale and reports it a lot nicer to walk to work in pure fresh air than to ride in a stuffy street car.

EAST
CHICAGO

FLAG

DAY

METALS
FAMILY

On June 14th at 12:40 p. m. a new flag waved for the first time its message of Liberty and Equality from our flag staff, and Flag Day was fittingly observed by the following program:

ORDER ONE

Assembly—By Band.

ORDER TWO.

Eagle Call—Rally to Flag Staff.



ORDER THREE.

Raising of Flag—By Misses McLean, Stumpf,
Thornton, Vanderhoof.

Song, "Star-Spangled Banner".....
.....Mrs. George Hannauer

ORDER FOUR.

Salute to the Flag and Pledge of Allegiance
(Said in Unison.)

"I pledge allegiance to my Flag and to the
Republic for which it stands. One nation
indivisible with Liberty and Justice for all."



T. H. Grabowski J. F. Johnson
Mrs. Hannauer J. K. Reppa

ORDER FIVE.

"A Little Talk in Polish".....

.....By Teofil H. Grabowski

ORDER SIX.

Selection by the Band.

ORDER SEVEN.

A Short Address in Hungarian.....

.....By J. K. Reppa

ORDER EIGHT.

American's Creed. (Said in Unison).

"I believe in the United States of America
as a Government of the people, by the people,
for the people; whose just powers are
derived from the consent of the governed;
a democracy in a republic; a sovereign na-
tion of many sovereign states; a perfect
union; one and inseparable, established up-
on these principles of freedom, equality,
justice and humanity for which American
patriots sacrificed their lives and fortunes.

"I therefore believe it is my duty to my
country to love it; to support its Constitu-
tion; to obey its laws; to respect its flag, and
to defend it against all enemies."



PAGE

NUMBER

FOUR

ORDER NINE.

Selection by the Band.

ORDER TEN .

"Four Minutes of Patriotism".....
.....By J. F. Johnson

ORDER ELEVEN.

National Anthem, "America".....
.....By Mrs. Geo. Hannauer

ORDER TWELVE.

Distribution of Liberty Bonds to those who
have completed their payments.

COMMITTEE IN CHARGE.

| | |
|--------------------------|----------------|
| W. D. Kilbourn, Chairman | Steve Sabo |
| J. J. Mulligan | Wm. Kushniak |
| R. S. Bonsib | C. W. Williams |

Among the Flag Day visitors to the plant were Mesdames William Thum, George Hannauer, E. Eiple, J. J. Mulligan, C. H. Reed and Miss Margaret Mulligan.

BY LIEUT. ARCHIBALD M. LAURIE,

R. A. M. C., M. O. of 18th London Regiment
in Palestine

EDITOR'S NOTE: The following war poem was written by the brother of Mr. John Laurie, Comptroller of the U. S. S. R. & M. Co.:

THE LONDON IRISH REGIMENT.

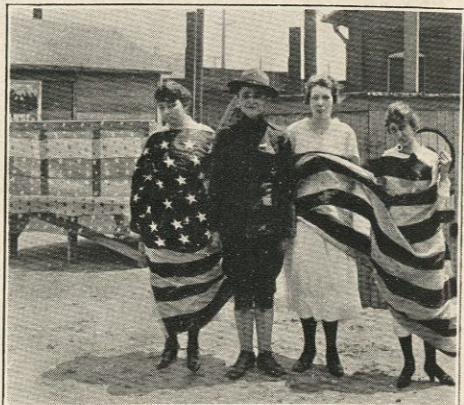
(A prose poem written on the occasion of the regiment being ordered to Jericho)

The London Irish are the boys to work as well as play, a cheery crowd; a jovial crew but in a stunt the chosen few, they chase the Turk away.

They aren't Irish all of them, there's Scotch and English too. They neck their beer, and rum soon flies; but when they're called, you bet your eyes, John* trembles in his shoes.

They wanted a battalion to take a hill one day. "I wonder who we'll get to do old Johnny in the eye, don't you?" "Where's the 18th?" cried Shea** "they've been in all the seats of war from France to Palestine, but still they must keep on at it; if they're called back they'll take a fit, so take the hill at nine."

And after that, just think of this, to us it was a blow, he said, "You've done this stunt so well, and sent so many Turks to — Heaven —. Now go to Jericho."

FLAG RAISERS.

Miss Vanderhoof

Miss McLean

Private Bigge

Miss Stumpf

The London Irish are the boys, I'm sure you will agree. When Hun and Turk on land won't fight, they'll send us, don't you think they might, to end the war at sea.

*"John" refer to "Johnny Hurk."

**"Shea" is name of Divisional General.

LINES WRITTEN NEAR JERICHO.

With Red Anemone the hills are dotted,
But with the blood of men the plain is spotted.

The fight goes on as day succeeds to day
In this fair land which once He trod, they say

Who rules by love; and war still holds its sway.

With Red Anemone the hills are dotted,
But with the blood of men the plain is spotted.

The waters of the Salt Lake peaceful lie,
But yet the storm of warfare rages high.

Has He no power, who once on Galilee
Said "Peace be still" unto the troubled sea?

Is He alive? Some say he cannot be.
The waters of the Salt Lake peaceful lie,
But yet the storm of warfare rages high

The Potter silently works out the plastic clay

"He hath done all things well," at last we'll say.

The race works out her destiny in this
From elemental scum to Heaven's bliss
And God upholds the man whose foot would miss.

The Potter Silently works out the plastic clay

"He hath done all things well," at last we'll say.



PAGE

NUMBER

FIVE

THE SMELTING AND REFINING OF COPPER

A Series of Articles on the Treatment of Ores and Metal at the Chrome Plant of the United States Metals Refining Company, Based on an Illustrated Lecture Prepared by the Management.

By J. J. MULLIGAN—Metallurgist Grasselli Plant.

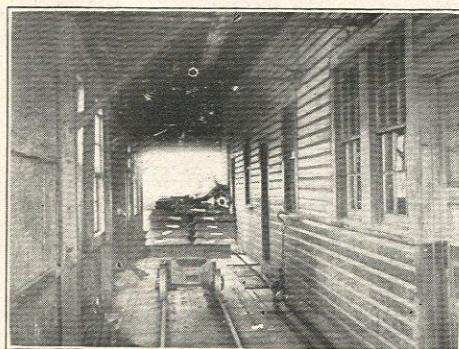
Part 3. Smelting Ores to Make Impure Copper

The refinery obtains its crude product from many sources. The slabs of crude copper weight about 300 pounds each and are trucked out by hand, and by a flip given to the truck the slabs are discharged from it without any other handling whatsoever.



Unloading Copper Bullion.

Copper at present has a value of around 23.5 cents per pound, or a value per ton of \$470.00. The silver and gold contents of the impure copper often amount to \$100.00 per ton so that a ton of the impure copper may be worth \$570.00 or even more. The



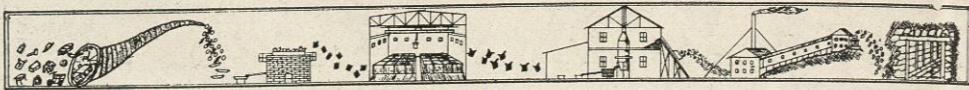
Scale House Where Bullion Is Weighed in Duplicate.

weighing of this product is therefore given our most careful attention. Throughout the plant all weighings of any nature whatsoever are made in duplicate; not by having two men to do the weighing on the same scales, but by having two scales with a weigher at each. Our weighings of impure copper are made in drafts of 10,000 pounds each, upon so-called "baby" track scales, which have a capacity of 20,000 pounds. We have found it very advantageous to use a scale of large capacity than we expect to load it with, as its accuracy is thereby increased.

Another picture shows one side of our weigh house with a load of impure copper waiting to be weighed on one of the duplicate scales.

The scales are accurate to a pound, and the scales must agree within one pound of each other. Before work is started in the morning and at noon a test car of known weight is run over each scale, and the scale tested, and unless it is accurate the scale is not used. This test car is periodically tested against weights which have been standardized by the Government. As a further check to the accuracy of our weighing work we have representatives of the best known scale manufacturers visit our plant in alternate weeks to carefully overhaul all of our scales and test same.

After the impure copper has been weighed it is next sent to the sampling room where a sample is made to represent each lot. This sample is sent to the Laboratory and analyzed for copper, silver, gold and the other constituents. From the analysis the value of the material is determined and payment made to the owner.



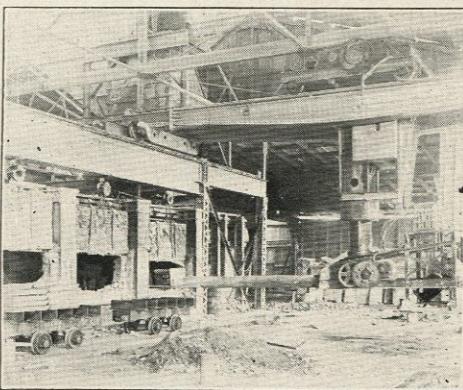
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SIX

In the sample room the slabs are put upon turn tables located on trucks mounted on a circular track. Each pig is brought underneath the drill press and a hole drilled completely through each slab. The hole is drilled in a different position in each slab according to a regular order, so that upon the completion of the drilling of a lot a hole has been drilled in each pig for each square inch of surface. The combined drillings are sent to the laboratory. The slabs are handled from the industrial trucks to the turn tables, and back to the trucks, by means of compressed air lifts. The sampled slabs are then ready for the next stop, which consists of a melting down of the impure copper in a reverboratory furnace.

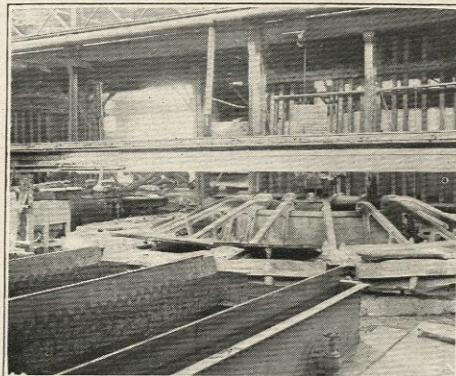
The reverboratory furnace has a capacity of from 300,000 to 400,000 pounds of copper, and is fired with soft coal. The copper is melted down, blown with air through pipes inserted in the molten bath to eliminate some of the impurities, and then treated with wooden poles to eliminate the oxygen which has been absorbed by the molten copper. The copper is then ready for casting into what are called anodes.



Charging Crane.

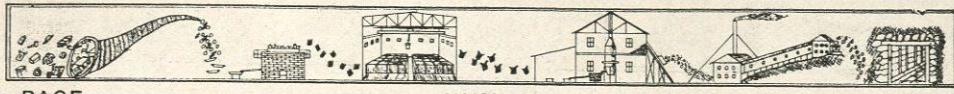
This furnace operation takes twenty-four hours from the time the material is charged into the furnace. The waste gases from his furnace pass through Babcock and Wilcox boilers and then through an economizer and finally es-

cape from the stack. A considerable quantity of steam is thus generated without any cost for fuel, and only at the cost of supervision and maintenance of the boilers and economizers. There are several of these furnaces for the operation of converting slabs into anodes. The anode is 36x36x2½ inches thick as shown in picture. The



Casting Wheel.

purpose of the shape of the anode will be seen later. These anodes weigh about 500 pounds each and as from 300,000 to 400,000 pounds of same must be cast from a furnace each day, it is readily seen that any material amount of hand labor would be prohibitive to the handling of such a tonnage. This problem has been very nicely solved by a mechanical wheel which carries on its circumference, moulds, which by rotation of the wheel are successively brought beneath the spot from which the molten copper flows out of the furnace. As each mold is filled the wheel is rotated sufficiently to bring the next mold under the spout. Further along on the wheel the cast copper is subjected to sprays of cooling water so that when each mold has made a half revolution from the casting spot the copper has become sufficiently solid so that it can be removed from its mold.

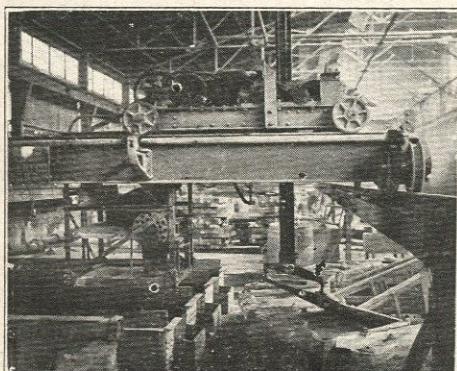


PAGE

NUMBER

SEVEN

In this casting operation a man moves a trolley over the mold, lowers a pair of grips attached to a compressed air lift, and picks up the anode by means of its ears, raises same, runs the trolley back on the overhead track, releases the compressed air lift, and places the anode in a cooling tank.



Traveling Crane.

By means of a crane devised by one of our employees, one operator performs the whole operation by raising the anode from its mould and depositing same in the cooling tank, and the operator is at no time subjected to the heat as in the old process. When the anodes have cooled they are raised from the cooling tank by means of an overhead crane which picks up the entire tank full of anodes at one time. A tank full consists of 30 anodes each weighing 500 pounds, or a total of $7\frac{1}{2}$ tons lifted at one time. I think you will have perhaps noted that the substitution of mechanical handling devices for hand handling devices has taken place wherever possible.

WHAT THE DEFEAT OF ENGLAND AND FRANCE WOULD MEAN TO US.

By LAWRENCE MULVEY.

EDITOR'S NOTE: Lawrence was one of the first volunteers from the Grasselli Plant.

There are some people in the United States who do not take into consideration that they are in a "World-Wide War" and what would become of our dear U. S. if France and England could not hold out long enough or until we could give them help. They do not think about their own wives and children and what would become of them if the Germans would get so far as to get over on U. S. soil and do the same thing here as they did in Belgium and part of France.

I have heard a few people down in some of the towns of Mississippi say just these words: "What do I have to go to France for, I have nothing over there that belongs to me." If you heard some fellow say that what would you tell him? Would you agree with him? I do not think you would, or at least I would not. I would put him down as a spy. Which would you want us to do, stay here and let them come over here, or have us go over there and stop them there? Which is the best way?

Here is a good little saying that everybody should read and keep.

"THINK before you SPEAK
And then DON'T SPEAK."

The man of metal will always get the metal.

* * *
Each success makes the next test easier.

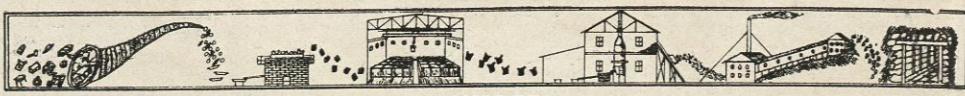
C. B. SPRAGUE.



All those in this organization who have known Mr. Sprague were deeply shocked and grieved on hearing of his death, due to injuries received in an automobile accident. I have had the good fortune to be intimately connected with Mr. Sprague on scientific research work and socially and it would be a vain attempt on my part to express the feelings of grief and regret at the thought that I will never see him again.

Mr. Sprague was a real man's man in his profession and by virtue of the high and noble ideals which he cherished in his heart.

—Wm. Thum.



PAGE

NUMBER

EIGHT

AX - I - D E N T - A X

Safety-First

United States Metals Refining Company

LESS TALK-- MORE ACTION

Published twice a month for and by the employees of certain plants of the United States Metals Refining Company and the United States Smelting Refining and Mining Company, in the interest of welfare and safety.

W. D. KILBOURN, ACTING EDITOR.

SATURDAY, JUNE 22, 1918.

"An empty train of thought is not near so good as a little wheelbarrow of ideas."

“WORK OR FIGHT.”

The new “Work or Fight” order which has recently gone into effect, is proving of benefit to this district. Men who have been in the habit of selfishly considering themselves only, and who are content to idle away their time are awaking to the realization that idleness is a crime. The order is timely. Loafing is not to be tolerated. Everybody is to be compelled to labor and have a taste of that satisfaction which comes through doing a good day’s work.

An occupied mind is less mischievous. There will be less crime. Guards and jailers will be released from duty to engage in productive occupation.

Recently a letter was received from the Brigadier General, Ordnance N. A., Washington, D. C., expressing appreciation of the Ordnance Department for the splendid work our men are doing. This letter reads as follows:

“May I not express to you and to each and every workman in your plant on this occasion the great appreciation of the Ordnance Department for the splendid work you are doing.

“Our work over here makes possible the work of our soldiers over there, and

it must indeed be a satisfaction to every worker when he realizes that the product of his hands goes over there to give a square deal to the men who are facing for us all, weariness, hardships and death.

“We over here are the soldiers’ resource and reliance. They depend upon our labor, and the work of every one of us has a direct bearing on the outcome of the war.

“I most earnestly hope and feel confident that you and the men and women associated with you will continue in the future as in the past to put forth your greatest efforts to produce for our soldiers.

“C. C. WILLIAMS,
“Brig. Gen., Ordnance N. A., Acting
Chief of Ordnance.”

Now let us leave nothing undone that we can do to help the allies: Let us:

Work hard each day,
With a few shifts pay;
Buy bonds to help the camps,
Let the interest go to thrift stamps.

This war is a painful necessity. We are daily losing those dear to us. People, broken hearted are weeping upon our streets.

We are learning lessons of Brotherly Love, Self-Sacrifice, Unity, Industry and Economy.

YOU’LL WIN.

If you’ll sing a song as you go along,
In the face of the real or fancied wrong,
In spite of the doubt if you’ll fight it out,
And show a heart that is brave and stout;
If you’ll laugh at the jeer and refuse the tears,
You’ll force the ever-reluctant cheers
That the world denies when a coward cries,
To give to the man who bravely tries.
And you’ll win success with a little song
If you’ll sing the song as you go along!

—Robert McCain Fields.



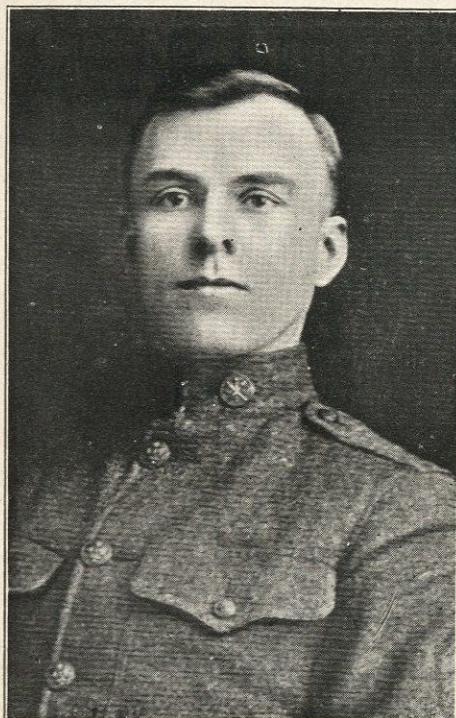
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NUMBER

NINE

News Nuggets from the Mammoth Mine

Gathered by Harry Hunt—Mammoth Correspondent.



Corporal B. A. Rucker

114th aero squadron, now at Belleville, Ill., formerly diamond drill runner, for several years at Mammoth.

RED CROSS DRIVE.

Now that the second great Red Cross drive is over, and we have read the noble manner in which people of all ranks and descriptions have responded to the appeal made to their generosity, it is exhilarating to a degree to recall what the employees of the Mammoth Plant have done toward swelling the grand total that was so freely subscribed. When the lists were given out to the collectors it was understood that men should be asked to give one day's pay, and now that the lists are closed it is found that the score is very nearly 100 per cent perfect. It was expected of course that our native born citizens would contribute freely, but that those

of foreign birth, many of whom have but an imperfect knowledge of our language, and still less of the great American ideals, should 'come through' in such a liberal manner is almost in the nature of a revelation. In the amounts given no notice is taken of the large subscription given by the U. S. S. R. & M. Co., the amounts given by the men of the various units of the Mammoth Plant, only, are taken into consideration. Here is the story briefly told: The Smelter, with 400 names on the pay roll, gave the sum of \$1,670, or at the rate of \$4.17½ per man; E. Z. Plant, 90 men, \$680, or \$7.01 each; Mammoth Mine, 115 men, gave \$603.60 or \$5.24 per man; Stowell Mine, 49 men, \$201.75, or \$4.12 per man; Shasta King Mine, 68 men gave \$335.50, or \$4.93½ per man. Doubtless other institutions have contributed larger amounts, individual average, but we are by no means ashamed of the showing made by the boys at Mammoth Plant.



Private F. Andrew

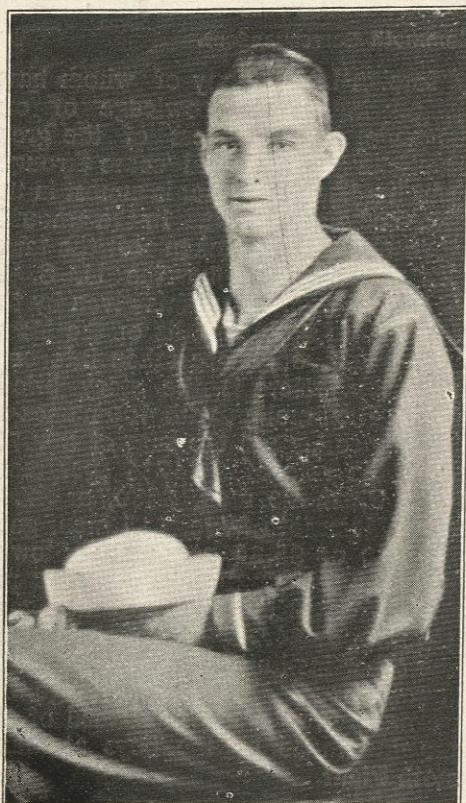
Co. C, 6th Field Battalion, Ft. Leavenworth. One of the Kennett boys, who served his apprenticeship in the machine shop, and joined the colors after nearly four years with the Company.



PAGE

NUMBER

TEN



Carl Ball

One of the boys who grew up at the Mammoth Mine, who joined the U. S. navy as soon as his age permitted, and who is now stationed at the Brooklyn navy yard.

* * *

GOGGLES.

In our safety campaign stress is laid upon the beneficial use of goggles in certain kinds of work, and yet, men are frequently observed using emery-wheels, without wearing them, although notices are posted urging their use.

The same may be said of men breaking slag, etc., occasionally, the benefits to be derived from their use is brought out in a very vivid manner, as was shown recently at the Zinc Plant. **H. F. Chambers**, sample boy at this plant, was breaking slag but wore goggles. A piece of slag flew, striking one of the lenses, breaking it. In speaking of the

matter afterward he said, "I dread to think of what would have occurred if I had not been wearing them."

In speaking of this, it recalls to mind a suggestion along these lines, made by **H. R. Hanley**, Superintendent of the Zinc Plant. It is as follows: "Why not use an ordinary base ball mask, covered with fine wire screening? This will not impair the vision, will allow for free ventilation, and will effectually prevent molten metal striking the face, in case of a blow-out, breaking cold slag, or chipping of any description, and will be a perfect safe-guard." I wonder if any of the readers of the "AX" have had any experience with this contrivance.

* * *

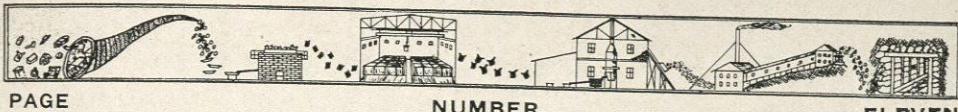
SOLUTION OF GAS PROBLEM.

That the bag-house removes nearly all of the obnoxious gasses is a well-known fact, but sometimes when there is an excess of sulphur in the ore, some gas escapes, with the result that when the wind blows them over the residential part of the town they are not welcome. A few days ago, one of the young ladies of the office staff met **T. Lancaster**, acidity man at the bag-house, and said, "Why don't you stop these gasses from coming here?" He said, "I will my dear," when I go on shift tonight, at eleven." At quarter past 11 the air cleared. When they met the next day the young lady remarked, "Won't you tell me, Mr. Lancaster, how you did it," and to this he replied, "Well that is a professional secret, but if you promise not to tell any one I will tell you what was done, but now how." The promise being given, this is what she was told. "The first thing was to change the direction of the wind."

* * *

MAMMOTH PERSONALS.

L. F. Kniffen, formerly Assistant Superintendent of Grasselli, is now at the Electrolytic Zinc Dept. of the Mammoth Plant, assisting to perfect processes of treating the flue dust from the Smelter.



CHROME PLANT SECTION

Solving the Change Room Problem at Silver Refinery

By JOSEPH CLARK—Supt. Silver Refinery

The Chrome Plant, like all others, where the rare metals are handled in quantities, has been keen to embody in its plans the latest practical ideas advanced in an effort to safeguard the interests of the company, and yet at the same time be absolutely fair and just to the men employed.

Entrance to the department is in charge of a gateman who is responsible for the proper entrance and exit of all persons. Upon entering the outer door you are confronted with the two other doors, one at the entrance to the department proper for plant officials and visitors, the other is at the entrance to street or dress clothes room of the men.

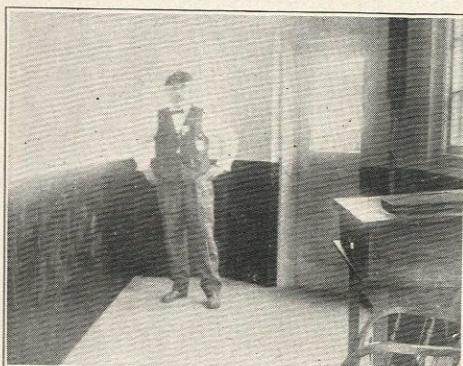
the gateman locks the door to the department proper, and opens the door to room No. 1, where the incom-



Locker Room.

ing men strip off their street clothes and place them in lockers. The door leading from this into room No. 2, which is the wash room and shower bath rooms, is equipped with a double lock system, one lock operating from the inside of room No. 1, the other from the inside of room No. 2. While the men are undressing in room No. 1, a small gong notifies a member of the department of the change of shift. When he arrives both he and the gateman open the locks on their respective sides, and the door is thrown open.

The men who have stripped now pass on through room No. 2 and into No. 3, where they don working clothes, then pass on into the department. The men relieved, now "hit the trail" for the change rooms. Entering room No. 3 they strip off all working clothes and place them in lockers, then pass into room No. 2, where the gateman sees that every man is thoroughly washed before leaving the room, particularly



Entrance to Department.

Both doors are electrically operated and in such manner that both doors cannot be open at the same time—one must be securely locked before the other can be opened.

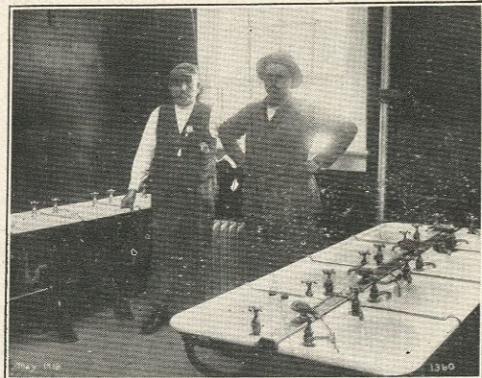
The doors are operated by means of push buttons inclosed in a metal case that is locked at all times, except when in actual use, the gateman being responsible for the care of the keys. At the appointed time for a change of shift



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The Wash Room.

their heads. After entering room No. 2, the men are not permitted to go again into room No. 3, but must pass directly into room No. 1, and don their street clothes.

While they are doing this the gate-man is carefully examining all lunch tins and boxes, also the many colored tea and coffee bottles carried by the men, and at the same time watching proceedings while the dressing is in progress. From here the men pass on and out of the department.

If the men carry tobacco tins, match boxes, or other articles of this nature, a double outfit is required, one for each change of clothes, since the transfer from room to room is not permitted.

The rooms are all plastered with Smooth-On finish, and painted white. They are large, clean and well ventilated. A large window runs the full length of the building, fitted with adjustable sky lights. All windows in room No. 1 open to the outside of the department, all windows from rooms Nos. 2 and 3 open directly into the department proper. This arrangement absolutely prevents anything being passed through to the outside.

At first thougtht, those not familiar with silver refining conditions might feel that the restrictions are a trifle severe, but a second thought will convince almost anyone that the whole arrangement is eminently fair. We feel

that all of our men are honest, and they are fully protected against the action of a "black sheep," if one should chance to get in. It awakens in the men a sense of the responsibility that rests upon them; it develops in them a sense of honor to the extent that no action of



Employees of the Day Shift.

theirs shall be open to the slightest suspicion, and, last, but not least, some fellow who may have a little grudge to settle hasn't the slightest opportunity to slip a piece of metal into another man's clothes, and inform the gateman that he saw the other do it.

* * *

A NEW WAY TO USE EYE WASH.

A new man came into the Silver Refinery the other day, and got a little slimes in his eye. A fellow workman fixed up the eye glass, filled it with solution, and handed it over to the man who raised the glass, swallowed the contents and said: "It tastes pretty good." J. C.

What the — kind of way is that to use eye wash, Joe?

* * *

The Red Cross received a generous donation during the last drive, the shops total being \$647.00.

* * *

The men who succeed best in public life are those who take the risk of standing by their own convictions.—Garfield.



CHROME PLANT PERSONALS

By CHAS. B. BENNETT—Chrome Correspondent.

Mr. D. C. Bowker, Safety First Inspector in the Yard Department, is spending his vacation with friends on Long Island.

Mr. Wm. F. Eppensteiner, Consulting Engineer, is spending his vacation at Roselle, N. J.

Mr. P. F. Hughes, Assistant Chief of Police, is spending his vacation with his mother at Hampton, N. J.

Mr. Blaine C. Pritchard, Car Record Clerk in the Purchasing Department, was taken to the Perth Amboy, N. J., Hospital Decoration Day, suffering with pneumonia.

Miss Hildegarde Geisen, Secretary to **H. N. Hoyt**, Purchasing Agent, has returned to her duties after a slight illness.

Mr. F. Ahlm, Chief Draughtsman, spent Wednesday afternoon in New York City on business.

Mr. M. A. Kucher, Chief Weighmaster, spent a day recently at Philadelphia, Pa., at the White & Bro. Plant.

Mr. W. F. Eppensteiner, No. 1, Master Mechanic, has accepted the position as Eastern Sales Manager for the "M. & M. Garage Floor Telephone Co.," of East Chicago, Ind. This, however, will not interfere with his present duties at the Chrome Plant.

Joseph O'Donnell, ex-machine shop, now in the U. S. Navy as second class machinist, called on his old pals in the machine shop Wednesday, June 12th.

Louis Wetterberg, of Perth Amboy, N. J., has accepted a position in the Plant Hospital as clerk.

Frank Davis has been transferred from the Store House to Timekeeper of the Yard Department.

Miss Kate O'Boyle, of Port Reading, has joined the Laboratory crew.

James Vega, ex-Metallurgical Department, is now at Camp Dix, address No. 78 Divisional Headquarters. Jim, at present, is doing cost accounting work.

William Weber, ex-Office, is in the navy, and located at Bridgeport, Conn., care U. S. Quartermaster's Department.

Alfred J. DuFrane, ex-Navy, is yeoman in the naval reserve station at Newport, R. I. Al is studying at the school here for a commission.

J. Frank MacKay, ex-Office, is at Camp Dix, N. J. His address is 153rd Depot Brigade, 39th Company, 10th Battalion, F. Annex.

Edward B. Ellis, ex-Office, is learning to be a machine gunner. His address is Aero Squadron No. 144, Kelly Field No. 1, San Antonio, Texas.

The last three men to enlist from Mechanical Department are **William Sager** and **George Kolbe**, U. S. Tank Corps, and **Edgar Brower**, U. S. Navy.

Ordnance Notes

Mr. Marks' great success with the development of the "Topgals" as an offensive weapon has inspired **Mr. H. M. Green**, our Tank House Superintendent, to conduct experiments looking towards acquiring a similar fame. The result has been his bringing out a type of bomb known as a "Relfsum" which he claims is most effective in stopping tanks.

Mr. Green says: "To fire the bomb—
1st. Stop before shutting off engine.
2nd. Throw out clutch.
3rd. Place gear shift in neutral.
4th. Accelerate the engine with gas.
5th. Cut off ignition."

Result—Muffler violently explodes, lands in ditch and stops all attacking tanks, as well as defending cars.

* * *

If you are out of your place get in your place. The place for you is where you can do the most good.



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Metals Family Personals

EAST CHICAGO PLANT

W. E. Jordan is still stationed in Boston and reports that he is busy, but that nothing exciting has transpired. He has bagged a few draft evaders and is on the lookout for deserters.

Lt. H. C. Ernst, M. R. C., who has been in Chicamauga Park for two weeks, writes the time sure flies and its a great life in camp,—to bed at 9:30 p. m. and up at 5:15 a. m. Hot weather down in Georgia and the fellows get wringing wet drilling. His address is Co. 20. Bat. No. 5, Camp Greenleaf, M. O. T. C.

Geo. Hayman, First Lieutenant 19th Field Artillery, has arrived safely overseas.

Mr. Thum was in Chicago on business last Wednesday.

Mr. Roy S. Bonsib gave us the "once over" on his way west. While in Philadelphia he with the other District Safety Engineers received instructions from Chas. M. Schwab, who heads the Emergency Fleet Corporation, as to the general character of the work and learned what was to be expected of him in his new position. He reports that Mr. Schwab is all that is claimed of him.

Mr. T. Hall, our genial shipping clerk, has returned from his vacation spent in Canada.

Mr. S. S. Svendsen, Chief Chemist, is enjoying a delightful two weeks' vacation on the jury.

Mr. Gus Semlyo has taken the oath and is subject to call by the navy. He is awaiting his call at his usual desk in the main office.

Mr. Frank G. D. Smith, Superintendent of the Silver Refinery and Blast Departments, leaves this week for a few days' stay in Philadelphia. Mrs. Smith accompanies him.

Disguised in a perfect coat of green

paint, **Mr. C. H. Reed's** motor boat adds a touch of color to the black waters of the Calumet River.

The Vegetable Club gardens are now producing abundantly of things green and appetizing and the members are carrying home arms full of produce.

ANOTHER "HOME RUN" FOR THE GOGGLES AT CHROME.

A. A. MARKS—Supt. Casting Dept.



Charlie Sabow.

Charlie Sabow, while tapping on number seven furnace, being a careful man and having some consideration for his wife and family, wore his goggles, as usual, on May 27th. It was well that he did, for ere long there was a splash of molten copper, which pretty thoroughly covered Charlie's goggles.

But Charlie still has two perfectly good eyes.

If he had left his goggles off that morning, Charlie would probably have lost one eye, at the least.

We show herewith a photograph of Charlie holding his eye'saver."

Moral: Molten copper and unprotected eyes are a bad combination—or the eyes.



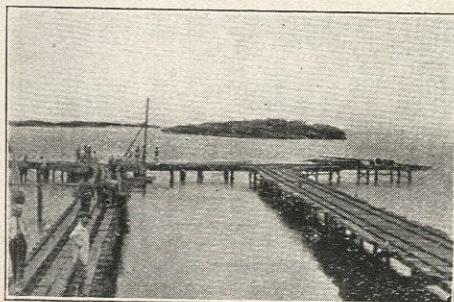
In The San Blas Country of Panama

By GEO. L. FITZ-WILLIAM—Mining Engineer.

(Copyright 1918 by U. S. Metals Ref. Co.)

Episode 5. Some Peculiar Customs and Ceremonies

Now to get back to our story of the mine. Sometime after the first trip, assistance was secured from the Republic of Panama, the little steamer San Blas was loaded up with material and supplies, not the least of which were fire arms, and a detachment of the "Policia Nacional" as the standing army of the Republic is named, and the journey down the coast started. Headquarters were made at El Porvenir, a small island off the Cabo de San Blas, about eight miles from the mine landing at Mindinga harbor. A small dock was built, and Colt machine guns set up on either end. The jungle was cleared and a large loading wharf built in the harbor. The ore outcropped at the top of



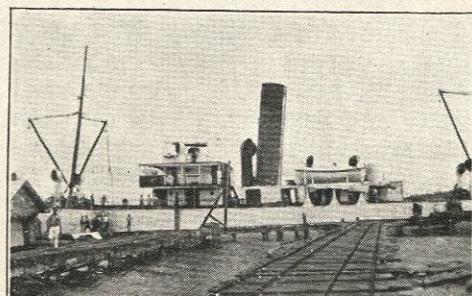
The Loading Wharf.

a large hill about 400 feet above sea level and about one and a half miles in a straight line from the coast. A small Decauville gauge railroad was built from the coast to a convenient spot at the foot of this hill. An incline from the top to the bottom of the hill delivered the ore to a large pocket at the bottom and through a chute the ore was transferred from the pocket to the railroad cars and hauled and stock-piled at the port. Loading from stock-pile to ship was accomplished by means of buckets on small trucks, the bucket being hoisted by the ship's winch up over



The Incline

the side and dumped into the hold. In running the railroad the right-of-way passed through a large cocoanut grove and it was necessary to chop down some of the coconut trees. The Indians, upon hearing of this, flocked to the mines like the proverbial swarm of bees. They were finally pacified by being informed that they would be reimbursed for every tree that was injured or destroyed at their own valuation. A number of difficult situations developed in this connection inasmuch as individual trees belonged to different Indians quite a number of whom were not residents in that vicinity but lived hundreds of miles down the coast. This, of course, led to quite a little bit of confusion. After a lengthy pow-wow the Indians compromised on \$1.50 for a full



Loading Ore at the Docks.

AX-I-DENT-AX



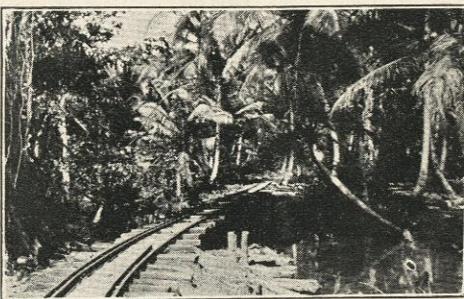
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grown tree and from 50 cents to \$1.00 for younger trees.

As the months went by the Indians seemed to lose their fear and visitors, bringing both wives and children, were



quite frequent, partly due I think to the fact that they received a good feed and invariably much to be desired presents in the shape of cloth and beads for the women, wire, old files for the making of fish spears, nails, etc., and cookies and candy for the children. One of the first of these visitors was the "sag-ala" or chief, Sam Davis, of the Island of Or-Gon-Dup or Rio Cedri.



The Village Down the Coast.

The marriage ceremony is simpler than that usually used by semi-barbarous peoples, though it includes the usual feasting and drinking. A young man in his travels about the different islands see a young woman whom he fancies, tells his parents, who arrange matters with the girl's parents. There is the usual chase and capture of the bride. Here the male superiority ends for it is the woman who does the marrying and she is really the dominating principle.

All inheritance is through the female line, a man being a kind of a servant to his wife's father and lives with her people. All of this ends, however, with the advent of the first child and at this time the man is free to come and go as he pleases. He may take another wife, in fact there is no limit to the number of wives allowed him, but no two wives may live on the same island or village. The women are great talkers and scolds, the old women being given all the menial tasks to perform. The women have, however, no part in the meetings of the tribes, elections of chiefs, and are rigidly excluded from all male gatherings of importance.



The Author's Official Headquarters.

COURAGE.

Courage! What if the snows are deep,
And what if the hills are long and steep,
And the days are short and the nights
are long,

And the good are weak and the bad
are strong.

Courage! The snow is a field of play,
And the longest hill has a well worn
way,

There are songs that shorten the long-
est night,

There's a day when wrong shall be
ruled by right,

So Courage! Courage! 'Tis never so
far

From a plodded path to a shining star.

—Writer Unknown.

TO THOSE WHO STAY

By Thomas Addison

NOT EVERY MAN MAY CARRY A GUN,
ELSE I WOULD BE CARRYING ONE;
YET, PLEASE GOD, FOR THE FLAG OF THE FREE
I WILL DO MY BIT AS IT COMES TO ME.
AND WHETHER WITH HAND, OR VOICE OF CHEER,
WHETHER IT COSTS ME LITTLE OR DEAR,
WHATEVER THE TASK MAY IT ONLY BE
WITHIN THE STRENGTH THAT IS GIVEN ME.

NOT EVERY MAN MAY CARRY A GUN,
BUT FOR THOSE WHO STAY THERE IS WORK TO BE DONE,
GOD HELP ME FIND TO MY HAND SOME DEED
THAT I MAY DO FOR MY COUNTRY'S NEED,
IF ONLY TO WIELD A SPADE OR A HOE
TO SMOOTH THE WAY OF THOSE WHO GO.
FOR WHETHER WE GO, OR WHETHER WE STAY,
IT'S THE WILL TO SERVE THAT SHALL WIN THE DAY.

—The Shelby Beacon.



"Tired of Saving
Wheat?
You don't know
what it is to be
Tired!"

JNDING